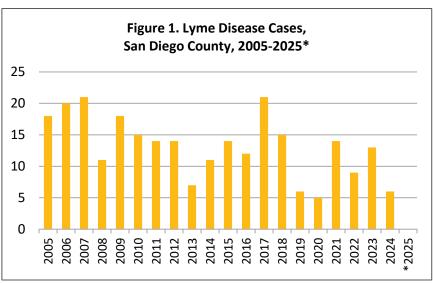
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LYME DISEASE

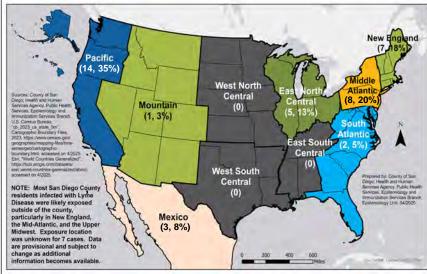
Lyme disease is the most common vector-born disease in North America, with estimated 90,000 cases in the United States in 2023. Most cases are found in the Northeast, mid-Atlantic, and Upper Midwest. Lyme disease is caused by a spirochete bacterium Borrelia burgdorferi transmitted through the bite of blacklegged ticks, specifically Ixodes scapularis in the northeast/Midwest and Ixodes pacificus on the West Coast. Case numbers peak around summer months (June-September) as more individuals are outdoors and traveling for recreational activities.

Lyme disease clinical manifestations appear in several stages.² Early localized disease occurs between 3 to 30 days after a tick bite and presents with fever, chills, headache, fatique. and arthralgias. The most distinctive feature is erythema migrans (EM), a slightly raised, itchy rash which develops around 7 days after a tick bite. EM can develop into the classic "bull's eye" appearance with central clearing, but the appearance can vary and typically self-resolves.3 Disseminated infection typically occurs several weeks after infection. Patients can develop multiple EM lesions, hepatosplenomegaly, transient myocarditis with varying degrees of atrioventricular (AV) heart block, and Lyme neuroborreliosis.^{2,3,4} The most common neurologic symptoms are peripheral and central nerve palsies, presenting as facial nerve palsy or painful radiculopathies, though can worsen into meningitis or encephalitis.2 Mono- or polyarticular arthritis usually develops 4-6



*2025 data are year-to-date; data current as of 4/15/2025. Data are provisional and subject to change as additional information becomes available.

Figure 2. Lyme Disease Cases by Location of Most Likely Exposure, San Diego County, 2020-2024 (n=40)



months after initial EM rash.³ Death due to Lyme disease is rare and typically occurs in patients with Lyme carditis.¹ Treatment for Lyme disease is antibiotics which can shorten disease duration and prevent development of late

disseminated symptoms. Providers can treat with oral doxycycline, amoxicillin, cefuroxime, or azithromycin for 10-21 days in both children and adults.⁵ For patients with Lyme carditis or cranial nerve palsy, oral doxycycline is

Continued on next page

The Monthly Communicable Disease Surveillance Report is a publication of the County of San Diego Public Health Services Epidemiology and Immunization Services Branch (EISB). EISB identifies, investigates, registers, and evaluates communicable, reportable, and emerging diseases and conditions to protect the health of the community. The purpose of this report is to present trends in communicable disease in San Diego County. To subscribe to this report, visit the Data and Reports page on the Epidemiology Program website (www.sdepi.org) and click on the subscribe link.







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LYME DISEASE, continued

preferred. For more severe neurologic symptoms, IV ceftriaxone may be used. Treatment failure is uncommon, though patients may develop antibiotic-refractory arthritis⁶ and "post-Lyme disease treatment syndrome" characterized by fatigue, memory and concentration difficulties, widespread myalgias and arthralgias, depression, anxiety, and sleep problems.^{4,7}

In San Diego County, there have been 47 reported cases of Lyme disease over the last five years (2020-2024). A likely location of exposure was identified for 40 cases, with half traveling to the Northeast or the Midwest.

About a third were exposed in the Pacific states, including a few where an exposure outside of San Diego County could not be identified. In San Diego County, Lyme disease can be spread by the bite of the Western blacklegged tick. The County of San Diego Vector Control Program routinely collects and tests ticks for Lyme disease, but rarely gets

Of reported San Diego County cases, 18% had

positive results.

Figure 3. Lyme Disease Transmission Cycle Transmission of Bacteria that Cause Lyme Disease = Lyme disease bacteria, Borrelia burgdorferi Tick larvae and nymphs Infected **Tick Hosts Adult Tick** Infected lymphal Tick A bite from an **Tick Hosts and** infected tick transmits Sources of Lyme Lyme disease to humans Disease Bacteria Blood-fed adult tick and eggs

Source: California Department of Public Health, https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/LymeDisease.aspx

EM, 26% had a cranial neuropathy, 43% had joint swelling, 3% had AV block, and 13% had chronic arthritis. Twenty cases visited the ED for their symptoms and 11 were hospitalized.

Diagnosis of Lyme disease is based on detection of serum antibodies against Lyme *borrelia*, with an initial sensitive enzyme immunoassay screening followed by IgM or IgG immunoblots for positive or equivocal results.^{2,3} Prevention efforts should be geared towards protection against tick-bites such as wearing repellents and long-sleeve shirts, hiking on trails and avoiding uncut grass, and thorough tick checks after being outdoors.

Resources

- Centers for Disease Control and Prevention (CDC) Lyme
 Disease website
- <u>California Department of Public Health Lyme Disease</u> website
- County of San Diego Department of Environmental Health and Quality (COSD DEHQ) Lyme Disease website

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Table 1. Select Reportable Diseases							
lable 1. Select Reportable Diseases		2025			Prior Years		
		January -		Avg YTD,			
				March	2024	2022-	2024
Disease and Case Inclusion Criteria (C,P,S)		March	February	(YTD)	YTD	2024	Total
Botulism (Foodborne, Infant, Wound, Other)	C,P	1	0	1	1	0.3	5
Brucellosis	C,P	0	0	0	0	0.7	1
Campylobacteriosis	C,P	64	60	200	247	202.7	1,133
Candida auris	С	7	24	49	29	16.3	152
Chickenpox, Hospitalization or Death	C,P	0	0	0	1	0.7	3
Chikungunya	C,P	0	0	0	0	0.3	2
Coccidioidomycosis	С	14	0	46	152	118.0	648
Cryptosporidiosis	C,P	7	6	21	34	21.0	129
Dengue Virus Infection	C,P	3	4	8	6	2.7	64
Encephalitis, All	С	2	5	8	12	8.0	49
Giardiasis	C,P	12	19	62	60	47.7	242
Hepatitis A, Acute	С	0	1	1	6	7.7	18
Hepatitis B, Acute	С	1	1	5	4	4.7	17
Hepatitis B, Chronic	C,P	35	44	128	166	191.3	723
Hepatitis C, Acute	C,P	0	1	1	22	27.0	100
Hepatitis C, Chronic	C,P	135	159	471	481	619.0	1,873
Legionellosis	С	5	5	16	19	23.7	81
Listeriosis	С	0	1	2	2	1.7	10
Lyme Disease	C,P	0	0	0	1	1.3	6
Malaria	С	0	1	1	5	2.3	18
Measles (Rubeola)	С	0	0	0	2	0.7	4
Meningitis, Aseptic/Viral	C,P,S	8	3	13	18	15.7	105
Meningitis, Bacterial	C,P,S	5	3	9	13	10.7	44
Meningitis, Other/Unknown	С	0	0	1	8	6.3	24
Meningococcal Disease	C,P	0	1	2	3	1.3	5
Mumps	C,P	0	0	0	1	0.7	2
Pertussis	C,P	22	36	96	145	64.7	729
Rabies, Animal	С	1	0	1	0	0.3	13
Rocky Mountain Spotted Fever	C,P	0	0	0	0	0.0	4
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	48	28	127	122	112.3	748
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	16	8	46	61	44.0	259
Shigellosis	C,P	27	20	74	124	96.3	468
Typhoid Fever	C,P	0	0	1	2	3.7	4
Vibriosis	C,P	5	1	9	8	4.3	50
West Nile Virus Infection	C,P	0	0	0	0	0.0	2
Yersiniosis	C,P	11	16	35	39	20.3	135
Zika Virus	C,P	0	0	0	0	0.0	1

Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously or subsequently reported counts due to differences in inclusion or grouping criteria, late reporting, or updated case information. Inclusion criteria (C,P,S = Confirmed, Probable, Suspect) based on Council of State and Territorial Epidemiologists/Centers for Disease Control and Prevention (CSTE/CDC) surveillance case criteria. Includes San Diego County resident cases only.

San Diego County Sexually Transmitted Infection Data | San Diego County Tuberculosis Data







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Figure 4. Select Enteric Infections by Month April 2024 – March 2025

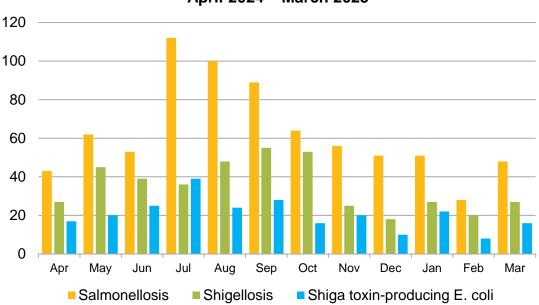
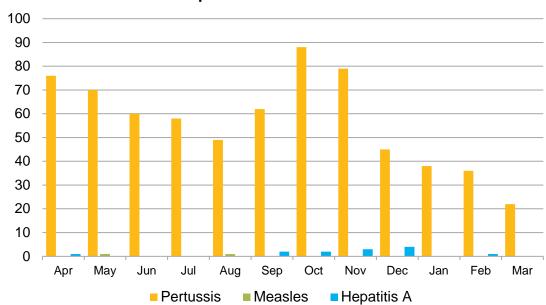


Figure 5. Select Vaccine-Preventable Infections by Month April 2024 – March 2025



Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously or subsequently reported counts due to differences in inclusion or grouping criteria, late reporting, or updated case information. Inclusion criteria (C,P,S = Confirmed, Probable, Suspect) based on Council of State and Territorial Epidemiologists/Centers for Disease Control and Prevention (CSTE/CDC) surveillance case criteria.



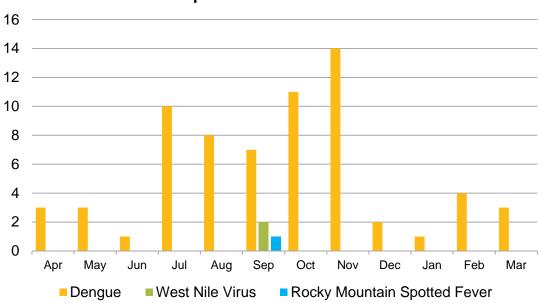




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Figure 6. Select Vector-Borne Infections by Month April 2024 – March 2025



See the County disease-specific webpages, for more information on West Nile virus and Dengue.

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Disease Reporting in San Diego County

San Diego County communicable disease surveillance is a collaborative effort among Public Health Services, hospitals, medical providers, laboratories, and the <u>San Diego Health Connect</u> Health Information Exchange (HIE). The data presented in this report are the result of this effort.

Reporting is crucial for disease surveillance and detection of disease outbreaks. Under the California Code of Regulations, Title 17 (Sections <u>2500</u>, <u>2505</u>, and <u>2508</u>), public health professionals, medical providers, laboratories, schools, and others are mandated to report more than 80 diseases or conditions to San Diego County Health and Human Services Agency.

To report a communicable disease, contact the Epidemiology Program by phone at (619) 692-8499 or download and print a Confidential Morbidity Report form and fax it to (858) 715-6458. For urgent matters on evenings, weekends or holidays, dial (858) 565-5255 and ask for the Epidemiology Program duty officer. For more information, including a complete list of reportable diseases and conditions in California, visit the Epidemiology Program website, www.sdepi.org.

Tuberculosis, sexually transmitted infections, and HIV disease are covered by other programs within Public Health Services. For information about reporting and data related to these conditions, search for the relevant program on the Public Health Services website,

http://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs.html.





